REMARKS

I. Statement of Related Patent Applications

The Examiner's objection has been addressed by amendment to add the proper statement of related patent applications, in particular priority of PCT/JP99/05366 under 35 U.S.C. 371, as clearly stated on the original Transmittal Cover Letter dated March 19, 2001.

An English language translation of the Japanese priority document is enclosed.

II. Sequence Rules Compliance

Applicants herewith submit a substitute Fig. 2 in which both sequences are identified by the appropriate SEQ ID NO: reference. Applicants herewith submit a substitute sequence listing in which the amino acid sequences of Figure 2 are listed and identified. An IBM PC/AT Dos Text CRF of the sequence listing is also enclosed on 3.5" computer disk, as the file named "2553us0pSeq.txt".

The Substitute Sequence listing contains no new matter, only the sequence information contained in Fig. 2 as filed. The undersigned certifies that the Written Sequence Listing and the CRF are the same in content.

III. Claim Rejection under 35 USC 112 second paragraph

a) *Claims 2, 3 and 20 have been canceled without prejudice*

Applicants have cancelled claims 2 and 3, without prejudice to filing future continuing applications. Also, claim 20 has been canceled without prejudice to the filing of future continuing applications. The rejection is now moot as to these claims.

b) *Claims 1 and 4 are clear and understandable*

Claims 1 and 4 have been amended to recite to a particularly defined protein amino acid sequence. One of ordinary skill in the art would be able

to read and understand the full metes and bounds of these claims as amended.

The amendment to claim 1 incorporating the limitation that the claimed protein is "at least 95% homologous to the amino acid sequence of SEQ ID NO:1" is derived directly from the comparison of the amino acid sequences of SEQ ID NO:1 & 2 which are 99.7% homologous, and per the description in the specification found on page 13, lines 30-35.

c) *Claim 15 is clear and understandable*

Claim 15 has been amended to more clearly recite the components of the recited method. This rejection should be withdrawn.

IV. Claim Rejection under 35 USC 101 and 35 USC 112 1st paragraph

a) *Rejection of the nucleic acid claims 4 – 9 should be withdrawn*

Pending claim 4, as now amended, is specifically directed to a nucleic acid of a defined sequence which encodes for a particular G protein coupled receptor protein. This nucleic acid is useful for producing the protein of Claim 1 using recombinant DNA methods. This is supported by a definite and demonstrated example. As the Examiner has acknowledged in the office action (Page 6, last paragraph), the Applicants assert, and "the specification discloses the GPCR of SEQ ID NO: 1 is encoded by the polynucleotide of SEQ ID NO: 3."

Thus, a specific utility asserted by the applicants, and well established in the art for such an invention is that the claimed specific nucleic acid does encode for and enable the production of a particular G Protein coupled receptor protein of SEQ ID NO:1 by using recombinant DNA technology.

Substantial and credible utility is further demonstrated by Example 2 of the specification, which clearly demonstrates the expression of the claimed nucleic acid in a transformed host cell.

The specification clearly enables one of ordinary skill in the art to make and use the claimed nucleic acids to produce a desirable protein product.

This rejection as to claims 4 - 9, should be withdrawn.

b) *The claimed protein of Claim 1, and the dependent claims thereby, have an asserted, credible, specific and substantial utility sufficient to meet the standards of §101*

Applicants have asserted a specific utility of the protein of Claim 1 is involved with diseases of dysfunction of the central function (such as for example, mental diseases comprising anxiety) and to physiological disorders (such as for example, with the growth and function of cells) (Specification page 48, lines 1-15) and thus the claimed protein is useful for treating or identifying treatments for such conditions.

The asserted utility is a credible utility in that the homology with a previously known protein and the expression pattern of the gene encoding for the claimed protein correspond to the development of the neural network and thus related to dysfunction of central function. Applicants are willing to submit for the Examiner's review; data which illustrate these gene expression patterns; demonstrate that the claimed protein is involved in accelerated cell proliferation involved with pathologic abnormalities in transgenic rats (such as cataract, focal desquamation and dysfunction in the kidney); and that the gene is highly expressed in neuronal tissues as would be expected for a protein involved in central dysfunction. To require any more demonstration is to demand that a disease mechanism be fully explicated before the asserted utility is deemed credible. That is not the proper standard.

This is a substantial utility in that the protein is identified and the nucleic acid encoding for such protein is identified such that direct recombinant DNA techniques can be directed to the expression and manipulation of the identified protein in accord with known methodologies.

The specification clearly enables one of ordinary skill in the art to make and use the claimed nucleic acids to produce a desirable protein product, and how to make and use such protein product in a specifically useful and credible fashion in the art.

Applicants request that this rejection be withdrawn.

V. Claim Rejection under 35 USC 102(b)

The claims as now amended are free from this rejection.

Applicants request that this rejection be withdrawn.

VI. Conclusion

Reconsideration of the claims as amended in view of the traverse made above is solicited. Early allowance of the claims is requested. Should the Examiner believe that a conference with applicants' attorney would advance prosecution of this application, she is respectfully invited to call applicants' attorney.

Respectfully submitted,

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(847)383-3372
(847)383-3391

Mark Chao, Ph.D., Reg. No. 37,293
Elaine M. Ramesh, Ph.D., Reg. No. 43032
Attorney for Applicants
Customer No. 23115

Takeda Pharmaceuticals North America, Inc.
Intellectual Property Department
Suite 500, 475 Half Day Road
Lincolnshire, IL 60069 USA